

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1 1. (original) A communication system for transporting Internet protocol-
2 formatted communications over a Universal Mobile Telecommunications System (UMTS)
3 wireless communications system, the communication system including a base station and
4 a radio network controller, the communication system further comprising:

5 an inter-working gateway adapted for interconnection to the radio network
6 controller and the base station, the inter-working gateway being adapted to communicate
7 via Internet transport protocols and UMTS-based transport protocols, the inter-working
8 gateway being further adapted to reformat communications with movable UMTS-based
9 radio-controlled network layer protocols for transport to the radio network controller and
10 to reformat communications with movable Internet radio-controlled network layer
11 protocols for transport to the base station.

1 2. (original) The communications system as recited in claim 1, wherein the
2 UMTS communications system exists at an installed site.

1 3. (original) The communications system as recited in claim 1, wherein the
2 inter-working gateway is supplied as pre-installed with the transport protocols.

1 4. (original) The communications system as recited in claim 1, wherein the
2 inter-working gateway is adapted to receive and download the radio-controlled network
3 layer protocols and the transport protocols from the base station.

1 5. (original) The communications system as recited in claim 1, wherein the
2 base station and the inter-working gateway are interconnected in a local area network.

1 6. (original) The communications system as recited in claim 1, further
2 comprising:

3 an SDRAM memory;

one or more channel elements, each comprising a digital signal processor and associated flash memory and an application specific integrated circuit to manage baseband processing; and

a microprocessor for configuring each channel element, storing user data in the SDRAM memory, and exchanging user data with the digital signal processor.

7. (original) The communications system as recited in claim 1, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

8. (original) The communications system as recited in claim 1, wherein an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

9. (original) The communications system as recited in claim 1, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications formatted with the movable Internet radio-controlled network layer protocols in a second direction.

10. (original) The communications system as recited in claim 1, further comprising:

a Node-B base station adapted for transmitting and receiving cellular telephone communications, the Node-B base station being interconnected with the radio network controller for exchanging wireless cellular telephone communications.

11. (original) The communications system as recited in claim 10, wherein the UMTS communications system exists at an installed site.

12. (original) The communications system as recited in claim 10, wherein the inter-working gateway is supplied as pre-installed with the transport protocols.

13. (original) The communications system as recited in claim 10, wherein the inter-working gateway is adapted to receive and download the radio-controlled network layer protocols and the transport protocols from the base station.

14. (original) The communications system as recited in claim 10, wherein the base station and the inter-working gateway are interconnected in a local area network.

15. (original) The communications system as recited in claim 10, further comprising:

an SDRAM memory;

one or more channel elements each comprising, a digital signal processor and associated flash memory and an application specific integrated circuit to manage baseband processing; and

a microprocessor for configuring each channel element, storing user data in the SDRAM memory, exchanging user data with the digital signal processor, and processing the movable protocols.

16. (original) The communications system as recited in claim 10, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

17. (original) The communications system as recited in claim 10, wherein an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

18. (original) The communications system as recited in claim 10, wherein an interconnection of the inter-working gateway with the base station carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

19. (original) An inter-working gateway for wirelessly transporting Internet protocol-formatted communications in a Universal Mobile Telecommunications System (UMTS) communications system, the inter-working gateway comprising:

means for communicating via Internet transport protocols and UMTS-based transport protocols;

means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller; and

means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway.

20. (withdrawn) A method for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the method comprising:

segmenting Internet-formatted communications into Internet framing protocol-protocol data units (FP-PDUs);

multiplexing the FP-PDUs over separate label switched paths via multiple protocol label switching (MPLS); and

exchanging the multiplexed FP-PDUs as formatted multiplexed MPLS data segments between a base station and a radio network controller.

21. (withdrawn) The method as recited in claim 20, further comprising:
installing radio-controlled network protocols in an inter-working gateway interconnected between the base station and the radio network controller.

22. (withdrawn) The method as recited in claim 20, further comprising:
segmenting the Internet-formatted communications into FP-PDUs of 350 octets maximum length.

23. (withdrawn) The method as recited in claim 20, further comprising:
formatting the FP-PDUs with UMTS radio-controlled network layer protocols for transport in the UMTS wireless communications system; and

4 formatting the FP-PDUs with Internet radio-controlled network layer protocols
5 for transmission as wireless Internet communications.

1 24. (withdrawn) The method as recited in claim 21, further comprising:
2 transporting the FP-PDUs formatted with UMTS radio-controlled network layer
3 protocols from the base station in a first direction; and
4 transporting the FP-PDUs formatted with Internet radio-controlled network layer
5 protocols in a second direction.

1 25. (previously presented) A method for transporting Internet protocol-
2 formatted communications over a Universal Mobile Telecommunications System (UMTS)
3 wireless communications system, the UMTS communication system including a base
4 station and a radio network controller, the method comprising:

5 reformatting communications using movable UMTS-based radio-controlled
6 network layer protocols for transport between the base station and the radio network
7 controller; and

8 reformatting communications using movable Internet radio-controlled network
9 layer protocols for transport between the base station and the radio network controller.

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